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# Terms of Reference

# Provincial Energy Efficiency Project

## Background

*<Rationale for the project, energy situation in the province, challenges, what would be achieved with [donor]’s contribution.>*

Objective 1: Establish policies and measures for the development of the energy conservation service industry across the province to ensure it becomes a viable force to promote energy conservation.

Objective 2: Establish a monitoring platform which

1. collects and analyzes data for reporting provincial level energy consumption,
2. collects and analyzes data to monitor compliance of major energy consumers with energy efficiency targets.

Objective 3: Establish policies and measures to improve Energy Management Systems (EMS) and scale up implementation of the [province] and [national government]’s EMS standards in major energy consuming enterprises.

Objective 4: Establish policies and measures to build capacity of [energy conservation offices] and [energy conservation supervision & implementation offices] at the provincial and municipal levels for effective execution of their respective functions.

## Objective

The objective of this assignment is to prepare the Project Document for the [province] Component of the proposed [donor] Provincial Energy Efficiency Project.

## Scope of Work

The Consultant will perform the following tasks:

### Task 1. Investigation Report

Prepare an investigation report that provides the analysis and rationale for proposed activities to be financed by the [donor]. The investigation report will focus on four objectives chosen for the [donor] support:

#### Objective 1 (see above):

The consultant will perform an ESCO/Energy Management Companies (EMC) market and policy assessment in the [province] and based on this assessment recommend key policies and measures that need to be created or strengthened to achieve objective 1. The consultant is expected to collect data on EMCs to support its assessment, including market size and trends, business scope, Energy Performance Contracting (EPC) models, revenues and profitability, and staff qualifications. It is estimated there are about [number] EMCs in [province] with various recognized EPC models.

The consultant should contact these companies as part of its assessment through survey methods, interviews and other methods it considers necessary.

Based on current business offerings by EMCs, the consultant is expected to collect data on market potential in key energy consuming sectors and demand for EMC services to estimate a realistic potential contribution of EMCs to reducing energy intensity in the [province]. The consultant is expected to collect data to support its assessment of policies and measures implemented by the provincial and municipal governments. The policy assessment should compare strategic objectives to develop EMCs with policies and measures employed. The consultant will focus especially on barriers to financing of energy efficiency investments and propose solutions.

#### Objective 2 and 3 (see above):

The consultant will assess pilots of implementing the [province] [energy management system standard] [code] by [number] enterprises and based on this assessment recommend key policies and measures that need to be created or strengthened to achieve objectives 3.

The consultant will identify implementation issues to assess the practical application of the standard and the implementation guidelines written to help the eight enterprises implement the standard.

The Consultant will assess the current capability of industry staff responsible for

1. complying with responsibility contract and
2. implementing the EMS.

Based on this the consultant will recommend the types of training programs needed, if any. The consultant will also assess current plans for the energy consumption compliance system under development in the [province] and recommend policies and measures that need to be created or strengthened to achieve objective 2.

The consultant will describe the current draft indicators, formats for reports and guidelines for filling them out based on interviews and documentation obtained from the provincial [energy conservation office]. It is envisioned there will be two intended uses of the reporting system:

1. tracking compliance with agreed energy consumption and energy intensity reduction targets; and
2. providing feedback to energy conservation offices on the effectiveness of their policies and measures.

The consultant is expected to collect data from the [number] pilot enterprises on the reduction in energy intensity and energy consumption, compare these to expectations at the start of the pilot, and based on its data collection experience identify potential implementation issues with the practical application of current plans for the reporting and compliance system. The consultant is especially asked to answer questions of how effective is the current evaluation criteria for measuring or calculating key performance indicators (e.g. consumption per unit of industrial output).

#### Objective 4 (see above):

The consultant will assess the current system of provincial and municipal [energy conservation offices] and [energy conservation supervision & implementation offices] based on this assessment recommend policies and measures in both hardware and software that need to be created or strengthened to build the capacity of the system to fully and efficiently execute their responsibilities.

The consultant is expected to identify not only capacity building needs but also opportunities where policies and measures rely more on market incentives to achieve the same purpose as administrative measures executed by the [energy conservation offices] and [energy conservation supervision & implementation offices], thus helping to scale up energy conservation across the province that might otherwise be difficult to do administratively due to budget limitations.

The consultant will through interviews of key officials and collection of official documents become familiar with the intended functions and responsibilities of the offices, identify expected new guidelines that already published or planned to be published. For this assessment, the consultant will evaluate the provincial level and [number] municipal level [energy conservation offices] and [energy conservation supervision & implementation offices].

[number] municipal case studies will describe the expected functions based on the [law on energy conservation] and provincial regulations and guidelines, the institutional arrangements established in the local government for [energy conservation offices] and [energy conservation supervision & implementation offices], how they are organized, the staffing qualifications, equipment, and budget resources.

The consultant will describe the activities executed by these offices and identify implementation issues faced by these offices on the practical application of the intended functions and responsibilities.

### Task 2. Project Document

The Consultant will prepare a project document following the outline provided in Annex 1. The document will contain a detailed description of the [province]’s component of the [energy efficiency scale-up project], including component objectives, rationale for [donor] grant support, a description of the [provincial government]’s energy efficiency programs, including description of sub-components and the activities, estimated component costs, component financing plan, institutional and implementation arrangements, project implementation plan, including a detailed [number]-month work program with Terms of Reference for activities and a procurement plan, and expected results including energy savings.

The recommended activities should be based on the Consultant’s investigation report and guidance from the provincial [energy conservation office], including requirements from the [donor] for this document.

The Consultant will prepare a workshop inviting key provincial and municipal [energy conservation offices] representatives, [number] pilot enterprise representatives, energy management companies, and outside expert resources to comment on a draft Project Document and Investigation Report before finalization.

The workshop expenses covered in the contract would include facilities and meeting amenities, presentation materials, and outside expert fees and accommodation. Outside experts would be agreed in advance with the Client and would include at least three with one having sufficient international experience in industrial energy efficiency. Participants will not be paid under this contract.

## Reporting

The consultant will report to the Director of the project management office and is expected to communicate closely with the provincial energy conservation office Staff.

## Qualifications of Key Staff

Project Manager / Energy Efficiency Specialist:

The individual will have a minimum master degree with at least five years of experience in industrial energy efficiency, energy service companies or similar field.

Energy Efficiency Specialists:

The team will include at least four individuals with a minimum bachelor degree in fields of engineering and management consulting with a minimum three years of experience in relevant fields and demonstrate knowledge in energy efficiency issues in the relevant fields.

The consultant is welcome to propose alternative team arrangements that substantively meet these basic requirements. The team will need to demonstrate capacity to understand issues related to the sectors listed in this TOR.

**ANNEX 1: Project Proposal Template**

### Objectives

### Background

1. Provide an overview of provincial energy use, energy conservation targets, achievements, challenges, and future plans.
2. Describe the details of each provincial energy conservation program to be supported by the project, including targets, detailed activities, institutional arrangement, financing, expected results (such as incremental energy efficiency investments, expected energy savings and emission reductions), and the current progress.
3. Here is an example to illustrate how much details should be included in the description. If the project will support the key industry enterprise energy efficiency targeting and monitoring program, the description should include the following details (suggesting 2-4 pages):
   * 1. Objectives, including expected results such as expected energy savings and emission reductions.
     2. Scope. How many national/provincial/prefectural/county enterprises in the program? How the scope is being defined and progressed? Who drives the progress?
     3. Structure. How the program is structured, who is responsible for what, what is the budget for the program?
     4. Targets and responsibility contracts. How the targets and responsibility contracts are established? What are the basic methods?
     5. Supervision of targets. How those targets and responsibility are supervised? Who are responsible for the supervision?
     6. Efforts to assist enterprises to achieve the targets. What have been done to assist enterprises to achieve the targets? E.g. provide energy efficiency management training? Disseminate energy efficiency technology information? Introduce auditing programs?
     7. Incentives for enterprises to meet the targets. Any awards for those who meet or exceed the targets and any consequences for those who fail to meet the targets?
     8. Current progress including a barrier analysis. How well enterprises meet their targets? Any feedback on the overall approach? What works and what does not? What are main barriers to achieve the program objectives and to sustain and scale up the program?

### Project Proposal

1. Provide an overview of the project framework using the following table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Project Objective: | | | | | |
| Project  Components | Supported energy conservation program | Expected  Outputs | Expected  Outcome | Indicative  [donor]  Financing | Indicative  Co-financing |
|  |  |  |  |  |  |

Provide estimated annual and cumulative energy savings (in tce) and avoided carbon emissions (in tCO2) over the 5 year implementation period for each project component using the following table.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Project  Component | Estimated Energy Savings (tce) | | | | | | Estimated Avoided CO2 Emissions (tCO2) | | | | | |
| Y1 | Y2 | Y3 | Y4 | Y5 | Total | Y1 | Y2 | Y3 | Y4 | Y5 | Total |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |

1. Detail project components/subcomponents. Each component/subcomponent should include the following information:
   * 1. Rationale. Why the project component is proposed? What is the specific linkage between the project component and the supported provincial energy conservation program? How it will be used to overcome the barriers that are identified in the supported program? How will the project component contribute to the supported program?
     2. Detailed activities and expected output.
     3. Specify whether international assistance is needed, if needed, why?
     4. Institutional and implementation arrangement.
     5. Financing including counterpart financing.
     6. Expected outcome/benefits, including estimated energy savings and avoided CO2 emissions.
     7. Approaches to monitor and verify energy savings and avoided CO2 emissions.

### Project Implementation Arrangements

a. Institutional arrangement

b. Procurement plan and disbursement arrangement

c. Schedule

d. Monitoring and evaluation arrangement

e. Project risks and risk mitigation measures

### First-Year Implementation Plan

a. First-year specific activities and costs (see the attached template)

b. List of planned contracts and the corresponding TORs